

REMARKS

This Amendment is responsive to the non-final Office Action of December 22, 2010. Reconsideration and allowance of claims 1-9, 12-15, 17, and 20-21 are requested.

The Office Action

Claims 1, 3, 8, 13, and 14 stand rejected under 35 U.S.C. § 103 over Ando (US 6,375,431) as modified by Wang (US 6,539,714).

Claims 2, 4-7, 12, 17, and 20 stand rejected under 35 U.S.C. § 103 over Ando as modified by Wang, as further modified by Bishop (US 2003/0206805).

Claims 9 and 15 stand rejected under 35 U.S.C. § 103 over Ando as modified by Wang, as further modified by deSimon (US 5,971,725).

The Claims Distinguish Patentably Over the References of Record

Claim 1, line 6, calls for a single constant upper speed value n_1 being associated with said upper range. Contrary to the Examiner's assertions, **Ando** does not disclose such a constant upper speed value n_1 associated with an upper inlet pressure range.

By contrast, the passage in Ando referenced by the Examiner "rotated at his higher rotating speed is possible as far as the motor is not overloaded" does not mean that the "higher rotating speed as possible" is constant. Rather, the quoted passage only implies that the rotating speed is as high as possible for each pressure value. However, the highest possible rotating speeds of different pressure values above the relatively low pressure may differ from each other.

Second, claim 1 calls for an alteration range of a continuous curve (line 3) in which each inlet pressure p is associated with a different, corresponding different speed value n (lines 10-11). Ando does not disclose any kind of alteration range of a continuous curve. Nor does Ando disclose a range in which each inlet pressure value p is associated with a different, corresponding speed value n .

The passage of Ando referenced by the Examiner "the rotating speed of the driving motor for the booster screw vacuum pump is reduced to the lowest rotating speed to maintain a degree of vacuum required for the evacuated chamber" does not mean that a different speed value n is associated with each inlet pressure p of

an alteration range. The quoted passage only means that once the pressure has become relatively low, i.e., has passed below a pressure threshold, one speed value is set, namely the lowest rotating speed (column 7, line 25). This passage does not mean that any possible pressure value below the relatively low pressure threshold would be associated with a different speed value of a continuous curve. In contrast, the passage of Ando cited by the examiner implies that each pressure value below the threshold of the relatively low pressure is associated with just one speed value, namely the lowest rotating speed.

Third, claim 1 calls for determining from the continuous curve, the speed n associated with the determined inlet pressure value p of the curve. Ando does not disclose determining from a continuous curve, a speed associated with a determined inlet pressure value in the curve. Ando does not mention any kind of curve associating speed values to pressure values. Consequently, Ando does not disclose that a speed value is determined from a curve. The passage in lines 15-32 of column 7 of Ando, cited by the Examiner, merely discloses that a highest possible rotating speed is used above a certain pressure threshold and that a low rotating speed is used below the threshold. However, Ando neither discloses, teaches, nor renders obvious that the speed values would be determined from a curve, much less from a curve in which a single constant upper speed value n_1 is associated with a pressure value above an upper threshold and in which each inlet pressure value is associated with a different speed value in an alteration range below the threshold.

Fourth, it might be noted that column 7, lines 16-32 of Ando, referenced by the Examiner, are substantially a repetition of claim 7 of Ando. It is submitted that the detailed description of Ando shows more clearly the Ando process and behavior than the highly generalized claim-type language relied upon by the Examiner. It is further noted that Figure 7 of Ando referenced by the Examiner is not a measure of motor speed versus inlet pressure. Rather, Figure 7 of Ando is a graph which relates inlet pressure to pumping speed, which Ando measures in liters/minute. Further, it will be seen from the detailed description of Ando that curves 7 and 8 relate to power consumption and are looking to reduce the rotating speed or power to drive the rotor to the minimum possible while still maintaining the desired evacuation pressure.

Fifth, **Wang** does not cure these shortcomings of Ando. Wang does not disclose an alteration range of a continuous curve in which each inlet pressure

below an upper limit pressure is associated with a different speed value. Wang does not even address the principle of different pressure ranges, much less a pressure range in which a single constant speed value is associated with different pressures and another range in which different speed values are each associated with each pressure value. Also, Wang does not even address the problem of how to reach the final pressure in a positive displacement pump nor how rapidly. Neither does Ando.

Moreover, it should be noted that Wang is directed to a turbocharger, which is concerned with supplying the appropriate output pressure to an internal combustion engine as a function of internal combustion engine speed. Rather than supplying air at a controllable pressure to an internal combustion engine, Ando is concerned with using a booster vacuum pump to draw a vacuum in a chamber. Thus, Wang and Ando are operating in different ways, for different purposes, to achieve different end results. It is submitted that Ando does not teach or motivate those of ordinary skill in the art to modify Ando as the Examiner suggests.

The other independent claims have similar limitations and distinguish patentably over the references of record for the reasons set forth above and others.

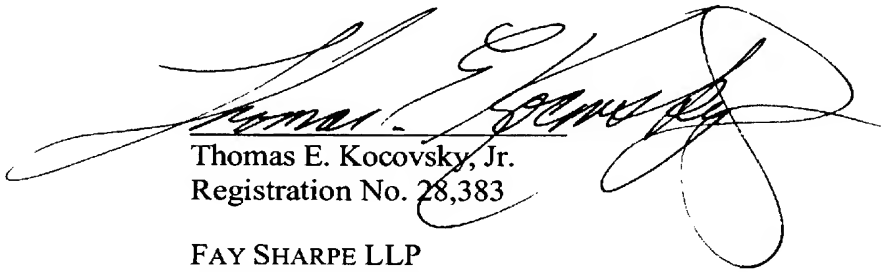
Accordingly, it is submitted that **claims 1-9, 12-15, 17, 20, and 21** distinguish patentably and unobviously over the references of record.

CONCLUSION

For the reasons set forth above, it is submitted that all claims are now in condition for allowance. An early allowance of all claims is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, the Examiner is requested to telephone Thomas Kocovsky at 216.363.9000.

Respectfully submitted,

A large, stylized handwritten signature in black ink, which appears to read "Thomas E. Kocovsky, Jr.", is written over the printed name and registration number.

Thomas E. Kocovsky, Jr.
Registration No. 28,383

FAY SHARPE LLP
The Halle Building, 5th Floor
1228 Euclid Avenue
Cleveland, OH 44115-1843
Telephone: 216.363.9000 (main)
Telephone: 216.363.9122 (direct)
Facsimile: 216.363.9001
E-Mail: tkocovsky@faysharpe.com